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May 27, 2009  
CSE 326 A  
Project 3 - Benchmark Data

Data Table 1 - Java timing / Hamlet.txt						
Method	Insertion Time (in nanoseconds)			Recall Time (in nanoseconds)		
	1	2	3	1	2	3
Unbalanced BST Tree	2.124E+08	2.372E+08	2.103E+08	4.854E+06	4.782E+06	4.733E+06
AVL Tree	5.970E+08	4.213E+08	5.485E+08	7.139E+06	9.131E+06	1.330E+07
Splay Tree	3.014E+08	2.969E+08	3.150E+08	4.064E+06	4.067E+06	4.187E+06
Hashtable	2.832E+08	2.731E+08	2.251E+08	1.232E+07	1.251E+07	7.435E+06
Java Tree	4.102E+08	3.060E+08	3.116E+08	1.046E+07	1.762E+07	1.760E+07
Java Hashtable	3.182E+08	2.428E+08	3.064E+08	1.236E+07	1.140E+07	1.172E+07

Data Table 2 - Java timing / The New Atlantis.txt						
Method	Insertion Time (in nanoseconds)			Recall Time (in nanoseconds)		
	1	2	3	1	2	3
Unbalanced BST Tree	1.983E+08	1.401E+08	2.315E+08	4.319E+06	3.057E+06	4.098E+06
AVL Tree	3.000E+08	2.384E+08	2.339E+08	5.086E+06	3.402E+06	3.474E+06
Splay Tree	2.878E+08	2.751E+08	2.264E+08	4.516E+06	3.957E+06	3.982E+06
Hashtable	2.620E+08	2.535E+08	1.681E+08	1.279E+07	1.076E+07	6.814E+06
Java Tree	2.812E+08	2.793E+08	3.022E+08	3.304E+07	3.100E+07	1.122E+07
Java Hashtable	2.499E+08	2.984E+08	2.607E+08	1.164E+07	1.092E+07	4.211E+07

Data Table 3 - Java timing / War_and_peace.txt						
Method	Insertion Time (in nanoseconds)			Recall Time (in nanoseconds)		
	1	2	3	1	2	3
Unbalanced BST Tree	1.554E+09	1.105E+09	1.097E+09	1.644E+07	1.607E+07	1.413E+07
AVL Tree	3.783E+09	3.922E+09	3.821E+09	1.764E+07	1.695E+07	1.730E+07
Splay Tree	1.823E+09	1.769E+09	1.843E+09	1.490E+07	1.433E+07	1.756E+07
Hashtable	1.324E+09	1.356E+09	1.334E+09	1.888E+07	1.873E+07	1.908E+07
Java Tree	1.381E+09	1.323E+09	1.395E+09	4.523E+07	3.115E+07	3.232E+07
Java Hashtable	1.228E+09	1.156E+09	1.081E+09	4.123E+07	5.327E+07	3.650E+07

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Data Table 4 - Java timing / War_and_peace_x9.txt						
Method	Insertion Time (in nanoseconds)			Recall Time (in nanoseconds)		
	1	2	3	1	2	3
Unbalanced BST Tree	7.298E+09	7.616E+09	7.588E+09	1.307E+07	9.978E+06	1.238E+07
AVL Tree	1.080E+10	1.208E+10	1.077E+10	1.073E+07	1.325E+07	1.030E+07
Splay Tree	1.232E+10	1.122E+10	1.126E+10	2.708E+07	1.245E+07	1.530E+07
Hashtable	7.003E+09	6.884E+09	6.877E+09	1.877E+07	1.876E+07	1.851E+07
Java Tree	9.471E+09	9.404E+09	9.880E+09	4.409E+07	2.936E+07	3.176E+07
Java Hashtable	7.628E+09	7.613E+09	7.502E+09	5.459E+07	3.753E+07	5.357E+07

Data Table 5 - Unix timing / Hamlet.txt			
Method	System Time (in seconds)		
	1	2	3
Unbalanced BST Tree	0.800	0.816	0.820
AVL Tree	1.876	1.892	1.996
Splay Tree	1.016	0.956	0.964
Hashtable	0.968	1.040	0.976
Java Tree	0.988	1.084	1.068
Java Hashtable	0.924	0.940	0.936
Count.sh	0.584	0.588	0.572
Count.pl	0.352	0.038	0.352

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






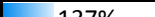

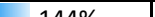



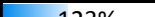
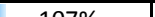




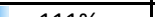
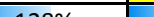






Data Table 6 - Unix timing / The New Atlantis.txt			
Method	System Time (in seconds)		
	1	2	3
Unbalanced BST Tree	0.716	0.696	0.688
AVL Tree	1.553	1.328	1.600
Splay Tree	0.956	0.876	0.828
Hashtable	0.996	0.908	0.996
Java Tree	0.788	0.956	0.944
Java Hashtable	0.736	1.256	0.848
Count.sh	0.280	0.292	0.284
Count.pl	0.160	0.168	0.156













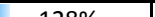




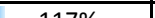




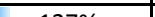








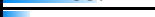








Data Table 7 - Unix timing / War_and_peace.txt			
Method	System Time (in seconds)		
	1	2	3
Unbalanced BST Tree	2.456	2.432	2.420
AVL Tree	6.964	7.336	6.980
Splay Tree	3.148	3.080	3.104
Hashtable	2.868	2.960	2.912
Java Tree	3.112	2.992	3.196
Java Hashtable	2.608	2.892	2.708
Count.sh	10.209	5.048	4.972
Count.pl	2.544	2.440	2.436

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Data Table 8 - Unix timing / War_and_peace_x9.txt			
Method	Insertion Time (in nanoseconds)		
	1	2	3
Unbalanced BST Tree	8.545	10.705	10.337
AVL Tree	14.773	14.605	14.969
Splay Tree	12.449	11.993	11.957
Hashtable	8.389	8.913	8.597
Java Tree	13.125	13.265	13.009
Java Hashtable	10.553	10.909	10.805
Count.sh	44.347	47.679	47.127
Count.pl	20.925	19.973	18.949

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Data Table 9 - Java Timing									
Text	Hamlet		The New Atlantis		War and Peace		War and Peace x 9		Average Normalized
Method	Combined Time Average (in nanoseconds)	Normalized	Combined Time Average (in nanoseconds)	Normalized	Combined Time Average (in nanoseconds)	Normalized	Combined Time Average (in nanoseconds)	Normalized	
Unbalanced BST Tree	2.248E+08	 100%	1.938E+08	 100%	1.268E+09	 100%	7.512E+09	 100%	 100%
AVL Tree	5.321E+08	 237%	2.614E+08	 135%	3.859E+09	 304%	1.122E+10	 149%	 206%
Splay Tree	3.085E+08	 137%	2.673E+08	 138%	1.827E+09	 144%	1.160E+10	 154%	 143%
Hashtable	2.712E+08	 121%	2.380E+08	 123%	1.357E+09	 107%	6.921E+09	 92%	 111%
Java Tree	3.578E+08	 159%	3.127E+08	 161%	1.403E+09	 111%	9.585E+09	 128%	 140%
Java Hashtable	3.010E+08	 134%	2.912E+08	 150%	1.199E+09	 95%	7.581E+09	 101%	 120%

Data Table 10 - Unix Timing									
Text	Hamlet		The New Atlantis		War and Peace		War and Peace x 9		Average Normalized
Method	User time (in seconds)	Normalized	User time (in seconds)	Normalized	User time (in seconds)	Normalized	User time (in seconds)	Normalized	
Unbalanced BST Tree	0.812	 100%	0.700	 100%	2.456	 100%	8.545	 100%	 100%
AVL Tree	1.921	 237%	1.494	 213%	6.964	 284%	14.773	 173%	 227%
Splay Tree	0.979	 121%	0.887	 127%	3.148	 128%	12.449	 146%	 130%
Hashtable	0.995	 122%	0.967	 138%	2.868	 117%	8.389	 98%	 119%
Java Tree	1.047	 129%	0.896	 128%	3.112	 127%	13.125	 154%	 134%
Java Hashtable	0.933	 115%	0.947	 135%	2.608	 106%	10.553	 123%	 120%
count.sh	0.581	 72%	0.285	 41%	10.209	 416%	44.347	 519%	 262%
count.pl	0.247	 30%	0.161	 23%	2.544	 104%	20.925	 245%	 100%

Data Table 11 - Combination Timing			
Method	Java Timing	Unix Timing	Overall Average
Unbalanced BST Tree	100%	100%	100%
AVL Tree	206%	227%	216%
Splay Tree	143%	130%	137%
Hashtable	111%	119%	115%
Java Tree	140%	134%	137%
Java Hashtable	120%	120%	120%
count.sh	-	262%	262%
count.pl	-	100%	100%

